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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,257	11/26/2001	Martin Andrew Schlosser	35015/002	8623

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EXAMINER	
KENNY, STEPHEN	

ART UNIT	PAPER NUMBER
3726	

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.	Applicant(s)	
	09/994,257	SCHLOSSER ET AL.	
	Examiner	Art Unit	
	Stephen J Kenny	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-10,12-19,23-27 and 30-51* is/are pending in the application.

4a) Of the above claim(s) *34-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 7-10, 12-19, 23-24, 26-27, 30-33, 50-51* is/are rejected.

7)☒ Claim(s) *3-6 and 25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 16-18, 23, 26, 27, 30-33, 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin (US Patent No 4559833) in view of Cucci (US Patent No 5672832).

Regarding claims 1 & 50-51, Sipin discloses manufacturing a Coriolis flowmeter adapted to extend a received process material comprising: coupling a flow tube (18) means to a base (10); affixing a driver (26) to said flow tube means; coupling a pick-off means to said flow tube means (34); and affixing inlet and outlet ends of said flow tube means to at least one process connection (76, 78) (see Figures 1, 2, 9).

Sipin does not explicitly disclose that the flow tube means is made entirely of PTFE or PFA material.

Cucci discloses a flow tube means (26) & process connection (16, 18 in Figure 3) made entirely of PTFE material (column 5, lines 51-54). The PTFE material used by Cucci is advantageous in that it is chemically-inert, & non-contaminating (column 5, line 53). Furthermore, the Sipin flowmeter is routinely employed in the food and chemical process industries (column 1, lines 24-26) wherein it is inherent that the homogeneity of the material flow is critical to performance results. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to fabricate the flow tube & process connection

of Sipin out of PTFE material as taught by Cucci in order to afford the advantages of pure, homogenous flow as discussed above.

Regarding claims 16-18, 23, 26, 27, 30, 31 Sipin discloses coupling the process connections (76, 78) to the base (74); by forming a receiving hole in said base, and securing said process connection in said hole (Figure 9); by adhering said process connection into said hole; inserting a flow tube end into a process connection to form a seal; note the step of laser welding said tube to said process connection is merely design choice (Figure 9 & column 6, lines 1-15); and employing optical sensors (which inherently require an opaque medium, column 5, lines 5-15).

Regarding claims 32 & 33, the Examiner takes Official Notice that the use of a temperature sensor on Coriolis flow meters is well established within the art. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a flow meter as disclosed by Sipin/Cucci and attach a temperature sensor to provide additional data regarding mass flow rates, density, and volume of the flow.

Claims 7, & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin/Cucci, as modified above, and further in view of Drahm et al. (US Patent Application Publication 2001/0035055 A1).

Sipin/Cucci, as modified above, disclose the instant invention except for bending of the flow tube is straightened (or bent) in a fixture while undergoing a heating process.

Drahm discloses bending of the flow tubes (paragraph 0096) in order to form a desired geometry. This bending operation is advantageous in that it increases the flexibility of the

manufacturing process by allowing a given flow tube to be bent (or straightened) for use in various Coriolis flowmeter configurations. Furthermore, the examiner takes official notice that the application of heat to the flow tube to facilitate bending is a concept old and well known. Heating (or annealing) of a component that is to be machined provides more desirable material characteristics (for example, it makes metal components more malleable) as well as reducing any residual stresses that may occur to the deformation process. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a Coriolis flowmeter as disclosed by Sipin/Cucci, by bending the flow tubes as taught by Drahm & the examiner's official notice in order to realize the advantages discussed above.

Claims 9-10, 12-15, 19, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sipin/Cucci as modified above, and further in view of Hopkinson (US Patent No 5261284).

Sipin/Cucci, as modified above, disclose the claimed invention except for coupling the flow tube to the base using adhesives. Hopkinson discloses using adhesives to attach the flow tube to the base of a flowmeter (column 2, lines 29-34), and clearly states it is advantageous to do so in order to improve the thermal characteristics. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form a flowmeter as disclosed by Sipin/Cucci while coupling the flow tube to the base using adhesives as taught by Hopkinson in order to realize this advantage. In further regards to claims 10 & 13-15, 19, 24 the use of cyanoacrylate adhesive, is merely a design choice sine applicant has not stated that such an adhesive solves any problem or is for any particular purpose, and the adhesive of Hopkinson

appears to be able to perform equally well; additionally attaching the pick-off means & process connections via adhesive would be an obvious an logical step given Hopkinson's disclosure.

Allowable Subject Matter

Claims 3-6, & 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 10/25/04 have been fully considered but they are not persuasive.

Applicant has put forth the argument that the USC 103 rejection is improper due to a lack of motivation to combine the Sipin & Cucci references. The examiner directs applicant attention to column 1, lines 15+, which explicitly state the advantages of constructing flow meters, made entirely of PFE material. As discussed in the above rejection of claims 1, 50, & 51, it is these advantages which provide the motivation to modify the Sipin reference with the teachings of the Cucci reference. Furthermore, on the contrary to the applicant's arguments, the Cucci reference is indeed directed to flow meter tubes (column 1, line 38).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so

long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In regards to claims 16-19, & 23-24, the applicant has argues that the references fail to disclose process connections attached to the frame, however the examiner notes that the process connections 76 & 78 of Sipin are "coupled" to the base 74 as claimed. Just as the process connections 507-510 of the instant invention are "coupled" to the base via threaded connection to the tube as illustrated in Figure 5, the process connections of Sipin are similarly "coupled" to the base by way of the connection to the tube (see Figure 9).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4431. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sk S. Kenny

DAVID P. BRYANT
PRIMARY EXAMINER